

Environmental
Restoration
Contractor

ERC Team

Interoffice Memorandum

0052041

Job No. 22192

Written Response Required? NO

Closes CCN: N/A

OU: 200-ZP-1

TSD: N/A

ERA: N/A

Subject Code: 4630

TO: M. A. Buckmaster, H4-80
M. J. Galgoul, H9-12

DATE: April 21, 1997

COPIES: See Below

FROM: R. T. Coffman
Onsite Measurement Services
H9-11/372-9373

SUBJECT: 200-ZP-1 PHASE II PERFORMANCE MONITORING, GROUNDWATER
RESULTS, MARCH 1997, REV 0

REFERENCES:

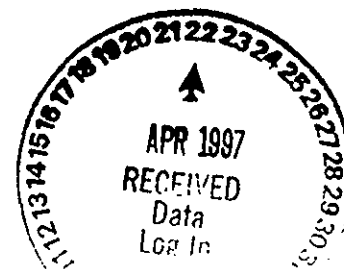
1. BHI, 1997, *On-Site Measurements Quality Assurance Plan*, BHI-QA-03, Plan 5.2, REV 1, Bechtel Hanford, Inc., Richland, Washington.
2. BHI, 1995, *Field Screening Procedures*, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.
3. BHI, 1997, *200-ZP-1 Field Screening Support Logbook*, EL-1359, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for groundwater samples analyzed to support 200-ZP-1 IRM Phase II performance monitoring. The Quality Assurance level for this work corresponds to QC-1 as specified in reference 1 (BHI 1997). Samples collected and analyzed during March 1997 were managed under SAF C97-014, C97-015, and C97-018

Attachment 1 contains Volatile Organic Compound (VOC) results for groundwater samples collected to support the referenced project. The VOC results were generated using a Hewlett Packard 5890 gas chromatograph with a headspace autosampler operated in accordance with Field Screening Procedure (FSP) 1.29, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water Using Hewlett Packard 5890 Gas Chromatograph* (BHI 1997). Information concerning operation and calibration of the gas chromatograph is contained in the instrument logbook EL-1329. Please contact me if you have any questions on this information.

R. T. Coffman, Engineer/Analyst

R. T. Coffman
RTC:rtc



Attachments:

M. A. Buckmaster, H4-80

Page 2

Attachment 1. 200-ZP-1 IRM Phase II Performance Monitoring, Groundwater Results,
March 1997

Attachment 2. Sample Chain of Custody Sheets

Copies:

D. E. Ayres, B1-35, w/attachments 1 and 2

B. H. Ford, H0-02, w/attachment 1 only

J. D. Isaacs, H0-19, w/attachment 1 only

I. D. Jacques, H9-10, w/attachment 1 only

R. B. Kerkow, H9-10, w/attachment 1 only

S. A. Strobe, T7-12, w/attachment 1 only

D. A. St John, N1-28, w/attachment 1 only

L. C. Swanson, H9-11, w/attachment 1 only

BHI Document Control, H4-79, w/original attachments

200-ZP-1 Phase II Performance Monitoring
Groundwater Results, March 1997
SAF C97-014, C97-015, and C97-018

<i>Sample Location</i>	<i>HEIS Number</i>	<i>Sample Date</i>	<i>Analysis Date</i>	<i>Chloroform (µg/L)</i>	<i>Carbon Tetrachloride (µg/L)</i>	<i>Trichloroethylene (µg/L)</i>
299-W15-1	BOJRN7	3/20/97	3/27/97	24	3000	17
Duplicate @ 299-W15-1	BOJRN8	3/20/97	3/27/97	23	2600	16
299-W15-7	BOJRN9	3/19/97	3/27/97	40	2600	19
299-W15-10	BOJRP0	3/19/97	3/27/97	33	3200	15
299-W15-11	BOJRP1	3/19/97	3/27/97	26	2600	6.5
299-W15-30	BOJRP7	3/20/97	3/27/97	61	6000	9.4
299-W15-31A	BOJRP9	3/20/97	3/27/97	44	4000	8.0
299-W15-38	BOJRP4	3/20/97	3/27/97	32	2400	<2.0
299-W18-23	BOJRP6	3/18/97	3/27/97	2.1	380	<2.0
299-W18-26	BOJKZ6	3/18/97	3/27/97	33	300	<2.0
699-39-79	BOJKZ5	3/18/97	3/27/97	<2.0	170	<2.0
699-47-60	BOKOV5	3/28/97	4/2/97	<2.0	<2.0	<2.0
699-51-63	BOKOV6	3/24/97	3/27/97	<2.0	<2.0	<2.0

j - Value less than practical quantitation limit

VOA Instrument: Hewlett Packard 5890 GC, Serial # 3235A47685
 Method: Dual DB-VRX columns, ECD/FID, 1 mL headspace injection
 Logbook: 200-ZP-1 Field Logbook, EL-1359

Analyst:

R. T. Coffman — 4-21-97
 R. T. Coffman

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-014-18		Page 1 of 1	
Collector JG HOGAN (RFS)				Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field	
Project Designation 200-ZP-1 IRM (Group 1) Groundwater Sampling--FY1997				Sampling Location 200-W		SAF No. C97-014					
Ice Chest No.				Field Logbook No. WHC-N-205 #65		Method of Shipment GOUT. TRUCK					
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		HCl to pH <4 Cooled to 4C					
				Type of Container		Gs*					
				No. of Container(s)		1					
Special Handling and/or Storage				Volume		40ml					
SAMPLE ANALYSIS						VOA BY FIELD GC -- Chlorinated Hydrocarbon					
Sample No.		Matrix *		Sample Date		Sample Time					
BOJRN7		Water		3-20-97		0919		X			
CHAIN OF POSSESSION		Sign/Print Names						SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT			
Relinquished By		Date/Time		Received By		Date/Time		Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other			
JG HOGAN (RFS)		3-25-97 1000		R2 Steiner R.J. Steiner		3-25-97 1000					
Relinquished By		Date/Time		Received By		Date/Time					
R.J. Steiner		3-25-97 1015		RT Coffman R.L. Coffman		3-25-97					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION		Received By						Title			
FINAL SAMPLE DISPOSITION		Disposal Method						Disposed By			
								Date/Time			
								Date/Time			

0447.1

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-014-20		Page 1 of 1			
Collector RF THORNTON (RFS)				Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-ZP-1 IRM (Group 1) Groundwater Sampling-FY1997				Sampling Location 200-W 299-W/15-7		SAF No. C97-014							
Ice Chest No. 5142 325				Field Logbook No. WHC-N-205-63		Method of Shipment ECST UEH							
Shipped To Mobile Laboratory				Offsite Property No. NA		Bill of Lading/Air Bill No. NA							
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		HCl to pH < 2 Cooled to 4C							
				Type of Container		Gs*							
				No. of Container(s)		1							
Special Handling and/or Storage				Volume		40ml							
SAMPLE ANALYSIS						VOA BY FIELD GC - Chlorinated Hydrocarbon							
Sample No.		Matrix *	Sample Date	Sample Time									
30JRN9		Water	MAR 19 1997	1219	X								
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT							
Relinquished By RF THORNTON (RFS)		Date/Time MAR 19 1997	Received By KB Hulse		Date/Time 3-19-97								
Relinquished By KB Hulse		Date/Time 3-19-97	Received By RT Coffman		Date/Time 3/19/97								
Relinquished By		Date/Time	Received By		Date/Time								
Relinquished By		Date/Time	Received By		Date/Time								
LABORATORY SECTION		Received By		Title		Date/Time							
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time							

Matrix *

S - Soil

SE - Sediment

SO - Solid

SL - Sludge

W - Water

O - Oil

A - Air

DS - Drum Solids

DL - Drum Liquids

T - Tissue

WI - Wipe

L - Liquid

V - Vegetation

X - Other

04471

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-014-21		Page 1 of 1	
Collector RF THORNTON (RFS)			Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field		
Project Designation 200-ZP-1 IRM (Group 1) Groundwater Sampling--FY1997			Sampling Location 200-W 299-1415-10				SAF No. C97-014				
Ice Chest No. SNL 325			Field Logbook No. WLC N 205-63				Method of Shipment COST UEL				
Shipped To Mobile Laboratory			Offsite Property No. MA				Bill of Lading/Air Bill No. MA				
POSSIBLE SAMPLE HAZARDS/REMARKS			Preservation		HCl to pH < 2 Cooled to 4C						
			Type of Container		Gs*						
			No. of Container(s)		1						
Special Handling and/or Storage			Volume		40ml						
SAMPLE ANALYSIS					VOA BY FIELD GC - Chlorinated Hydrocarbon						
Sample No.	Matrix *	Sample Date	Sample Time								
30JRP0	Water	MAR 19 1997	1103	X							
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT				Matrix *			
Relinquished By RF THORNTON (RFS)				Sign/Print Names				<ul style="list-style-type: none"> S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other 			
Date/Time 1350		Received By KB Hulce		Date/Time 1350							
MAR 19 1997		3-19-97		3-19-97							
Date/Time 1342		Received By RT Coffman		Date/Time 1342							
3-19-97		3/19/97		3/19/97							
Relinquished By KB Hulce		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION		Received By		Title		Date/Time					
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time					

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-014-22		Page 1 of 1		
Collector RF THORNTON (RFS)			Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-ZP-1 IRM (Group 1) Groundwater Sampling--FY1997			Sampling Location 200-W 299-W/5-11				SAF No. C97-014					
Ice Chest No. SIML 325			Field Logbook No. WHC-N-205-63				Method of Shipment RT 3A19.07 UEH					
Shipped To Mobile Laboratory			Offsite Property No. NA				Bill of Lading/Air Bill No. NA					
POSSIBLE SAMPLE HAZARDS/REMARKS			Preservation	HCl to pH < 2 Cooled to 4C								
			Type of Container	Gs*								
			No. of Container(s)	1								
Special Handling and/or Storage			Volume	40ml								
SAMPLE ANALYSIS				VOA BY FIELD GC - Chlorinated Hydrocarbon								
Sample No.	Matrix *	Sample Date	Sample Time									
30JRP1	Water	MAR 19 1997	0950	X								
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT				Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other				
Relinquished By RF THORNTON (RFS)		Date/Time MAR 18 1997		Received By RT		Date/Time 3-19-97 1530						
Relinquished By KB Hulse		Date/Time 3-19-97 1342		Received By RT		Date/Time 3-19-97						
Relinquished By		Date/Time		Received By		Date/Time						
Relinquished By		Date/Time		Received By		Date/Time						
LABORATORY SECTION		Received By		Title		Date/Time						
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By						Date/Time		

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST								C97-015-22		Page 1 of 1			
Collector JG HOGAN (RFS)		Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field							
Project Designation 200-ZP-1 IRM (Group 2) Groundwater Sampling-FY1997		Sampling Location 200-W		SAF No. C97-015											
Ice Chest No.		Field Logbook No. WHC-N-205 #65		Method of Shipment Govt. Truck											
Shipped To Mobile Laboratory		Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A											
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	HCl to pH <2 Cooled to 4C												
		Type of Container	Gs*												
		No. of Container(s)	1												
Special Handling and/or Storage		Volume	40ml												
SAMPLE ANALYSIS			VOA BY FIELD GC - Chlorinated Hydrocarbon												
Sample No.	Matrix *	Sample Date	Sample Time												
IOJRP7	Water	3-20-97	1017	X											
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT DOES NOT APPLY FOR 3-13-97								Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other			
Relinquished By JG HOGAN (RFS)		Date/Time 3-25-97 1015	Received By R.J. Hoffman		Date/Time 3-25-97 1015										
Relinquished By R.J. Hoffman		Date/Time 3-25-97 1015	Received By R.T. Coffman		Date/Time 3-25-97										
Relinquished By		Date/Time	Received By		Date/Time										
Relinquished By		Date/Time	Received By		Date/Time										
LABORATORY SECTION		Received By		Title		Date/Time									
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time									

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-015-23		Page 1 of 1																																																																																																																									
Collector JG HOGAN (RFS)			Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field																																																																																																																										
Project Designation 200-ZP-1 IRM (Group 2) Groundwater Sampling--FY1997			Sampling Location 200-W 214-W-15-310				SAF No. C97-015																																																																																																																												
Ice Chest No.			Field Logbook No. WHC-N-205 #65				Method of Shipment GOUT. TILKOR																																																																																																																												
Shipped To Mobile Laboratory			Offsite Property No. N/A				Bill of Lading/Air Bill No. N/A																																																																																																																												
POSSIBLE SAMPLE HAZARDS/REMARKS			Preservation		HCl to pH < 2 Cooled to 4C																																																																																																																														
			Type of Container		Gs*																																																																																																																														
			No. of Container(s)		1																																																																																																																														
Special Handling and/or Storage			Volume		40ml																																																																																																																														
SAMPLE ANALYSIS					VOA BY FIELD GC - Chlorinated Hydrocarbon																																																																																																																														
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:10%;">Sample No.</th> <th style="width:10%;">Matrix *</th> <th style="width:10%;">Sample Date</th> <th style="width:10%;">Sample Time</th> <th style="width:10%;"></th> <th style="width:10%;"></th> <th style="width:10%;"></th> <th style="width:10%;"></th> <th style="width:10%;"></th> <th style="width:10%;"></th> <th style="width:10%;"></th> <th style="width:10%;"></th> </tr> </thead> <tbody> <tr> <td>30JRP9</td> <td>Water</td> <td>3-20-97</td> <td>1139</td> <td>X</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td> </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>												Sample No.	Matrix *	Sample Date	Sample Time									30JRP9	Water	3-20-97	1139	X																																																																																																							
Sample No.	Matrix *	Sample Date	Sample Time																																																																																																																																
30JRP9	Water	3-20-97	1139	X																																																																																																																															
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT DOES NOT APPLY <i>cf</i> 3-13-97						Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other																																																																																																																							
Relinquished By JG HOGAN (RFS)		Date/Time 3-25-97 1000		Received By R2 Shiller R2 Shiller		Date/Time 3-25-97 1000																																																																																																																													
Relinquished By R2 Shiller		Date/Time 3-25-97 1015		Received By R.T. Coffman R.T. Coffman		Date/Time 3-25-97																																																																																																																													
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LABORATORY SECTION		Received By		Title				Date/Time																																																																																																																											
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time																																																																																																																											

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-014-25		Page 1 of 1	
Collector JG HOGAN (RFS)				Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field	
Project Designation 200-ZP-1 IRM (Group 1) Groundwater Sampling--FY1997				Sampling Location 200-W		249-W15 3D		SAF No. C97-014			
Ice Chest No.				Field Logbook No. WAC-N-205 #65		Method of Shipment GOUT. TRUCK					
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		HCl to pH <2 Cooled to 4C					
				Type of Container		Gs*					
				No. of Container(s)		1					
Special Handling and/or Storage				Volume		40ml					
SAMPLE ANALYSIS						VOA BY FIELD GC - Chlorinated Hydrocarbon					
Sample No.		Matrix *		Sample Date		Sample Time					
B0JRP4		Water		3-20-97		1250		X			
CHAIN OF POSSESSION		Sign/Print Names						SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT DOES NOT APPLY <i>3-13-97</i>			
Relinquished By JG HOGAN (RFS)		Date/Time 3-25-97 1000		Received By <i>R.T. Coffman</i>		Date/Time 3-25-97 1000		Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WJ = Wipe L = Liquid V = Vegetation X = Other			
Relinquished By <i>R.T. Coffman</i>		Date/Time 3-25-97 1015		Received By <i>R.T. Coffman</i>		Date/Time 3-25-97					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION		Received By		Title						Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By						Date/Time	

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-015-21		Page 1 of 1	
Collector KB HULSE (RFS)				Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field	
Project Designation 200-ZP-1 IRM (Group 2) Groundwater Sampling-FY1997				Sampling Location 200-W		299-1418-23		SAF No. C97-015			
Ice Chest No.				Field Logbook No.		WHC-N-205 #65		Method of Shipment GOUT. TRUCK			
Shipped To Mobile Laboratory				Offsite Property No.		N/A		Bill of Lading/Air Bill No. N/A			
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		HCl to pH <2 Cooled to 4C					
				Type of Container		Gs*					
				No. of Container(s)		1					
Special Handling and/or Storage				Volume		40ml					
SAMPLE ANALYSIS						VOA BY FIELD GC - Chlorinated Hydrocarbon					
Sample No.		Matrix *		Sample Date		Sample Time					
B0JRP6		Water		3-18-97		0939		X			
CHAIN OF POSSESSION		Sign/Print Names						SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT			
Relinquished By KB HULSE (RFS)		Date/Time 3-19-97		Received By RT COFFMAN		Date/Time 3/19/97		Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other			
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION		Received By						Title			
FINAL SAMPLE DISPOSITION		Disposal Method						Disposed By			
								Date/Time			

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-015-18		Page 1 of 1			
Collector KB HULSE (RFS)				Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-ZP-1 IRM (Group 2) Groundwater Sampling-FY1997				Sampling Location 200-W		299-W18-26		SAF No. C97-015					
Ice Chest No.				Field Logbook No.		WHL-N-205 #65		Method of Shipment GOVT. TRUCK					
Shipped To Mobile Laboratory				Offsite Property No.		N/A		Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		HCl to pH <2 Cooked to 4C							
				Type of Container		Gs*							
				No. of Container(s)		1							
Special Handling and/or Storage				Volume		40ml							
SAMPLE ANALYSIS						VOA BY FIELD GC - Chlorinated Hydrocarbon							
Sample No.		Matrix *	Sample Date	Sample Time									
B0JKZ6		Water	3-18-97	1019	X								
CHAIN OF POSSESSION		Sign/Print Names				<div style="display: flex; justify-content: space-between;"> <div> SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT </div> <div> Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other </div> </div>							
Relinquished By KB HULSE (RFS)		Date/Time 1342		Received By R. Coffman								Date/Time 1342	
LABORATORY SECTION		Received By				Title							
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By							
						Date/Time							

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-015-17		Page 1 of 1	
Collector KB HULSE (RFS)				Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field	
Project Designation 200-ZP-1 IRM (Group 2) Groundwater Sampling--FY1997				Sampling Location 200-W 699-39-79		SAF No. C97-015					
Ice Chest No.				Field Logbook No. WHC-N-205#65		Method of Shipment GOVT. TRUCK					
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		HCl to pH < 2 Cooled to 4C					
				Type of Container		Gs*					
				No. of Container(s)		1					
Special Handling and/or Storage				Volume		40ml					
SAMPLE ANALYSIS						VOA BY FIELD GC -- Chlorinated Hydrocarbon					
Sample No.		Matrix *		Sample Date		Sample Time					
B0JKZ5		Water		3-18-97		0904		X			
CHAIN OF POSSESSION		Sign/Print Names						SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT			
Relinquished By KB HULSE (RFS)		Date/Time 3-19-97		Received By RT Coffman		Date/Time 3/19/97		Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other			
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION		Received By				Title				Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time	

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-014-27		Page 1 of 1		
Collector AG RIZZO (RFS)			Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-ZP-1 IRM (Group 1) Groundwater Sampling-FY1997			Sampling Location 600		SAF No. C97-014							
Ice Chest No. SWL 435			Field Logbook No. LHLC-N-205 44 PAGE 13		Method of Shipment GOVT. VEHICLE							
Shipped To Mobile Laboratory			Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A							
POSSIBLE SAMPLE HAZARDS/REMARKS N/A			Preservation		HCl to pH <2 Cooled to 4C							
			Type of Container		Gs*							
			No. of Container(s)		1							
Special Handling and/or Storage Cool 4°C			Volume		40ml							
SAMPLE ANALYSIS					VOA BY FIELD GC - Chlorinated Hydrocarbon							
Sample No.		Matrix *	Sample Date		Sample Time							
BOKOV5		Water	MAR 28 1997		0856		✓					
CHAIN OF POSSESSION		Sign/Print Names										
		Relinquished By		Date/Time		Received By		Date/Time		SPECIAL INSTRUCTIONS TOTAL ACTIVITY RESULT REQUIRED 3-20-97 For copies of QES login to DL Stewart 372-1704 & JIM Dancart 372-7052		
		AG RIZZO (RFS)		4-1-97		RB Kerkow		4-1-97				
		Relinquished By		Date/Time		Received By		Date/Time				
		Relinquished By		Date/Time		Received By		Date/Time				
Relinquished By		Date/Time		Received By		Date/Time						
LABORATORY SECTION		Received By		Title				Date/Time				
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time				

Matrix *

- S - Soil
- SE - Sediment
- SO - Solid
- SL - Sludge
- W - Water
- O - Oil
- A - Air
- DS - Drum Solids
- DL - Drum Liquids
- T - Tissue
- WI - Wipe
- L - Liquid
- V - Vegetation
- X - Other

Pacific Northwest National Laboratory	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST								C97-014-28	Page 1 of 1
Collector RF THORNTON (RF)		Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field		
Project Designation 200-ZP-1 IRM (Group 1) Groundwater Sampling-FY1997		Sampling Location 600		SAF No. C97-014						
Ice Chest No. SMZ 268		Field Logbook No. LW HC - N-205 #67		Method of Shipment GOVT. VEHICLE						
Shipped To Mobile Laboratory		Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	HCl to pH <2 Cooled to 4°C							
		Type of Container	Gs*							
		No. of Container(s)	1							
Special Handling and/or Storage		Volume	40ml							
SAMPLE ANALYSIS			VOA BY FIELD GC - Chlorinated Hydrocarbon							
Sample No.	Matrix *	Sample Date	Sample Time							
BOKOV6	Water	3-24-97	1130	✓						
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *		
Sign/Print Names										
Relinquished By RF THORNTON (RF)	Date/Time 3-24-97 1000	Received By R2 Still	Date/Time 3-24-97 1400					S = Soil		
Relinquished By R2 Still	Date/Time 3-25-97 1015	Received By RT Gorman	Date/Time 3-25-97					SE = Sediment		
Relinquished By	Date/Time	Received By	Date/Time					SO = Solid		
Relinquished By	Date/Time	Received By	Date/Time					SL = Sludge		
Relinquished By	Date/Time	Received By	Date/Time					W = Water		
Relinquished By	Date/Time	Received By	Date/Time					O = Oil		
Relinquished By	Date/Time	Received By	Date/Time					A = Air		
Relinquished By	Date/Time	Received By	Date/Time					DS = Drum Solids		
Relinquished By	Date/Time	Received By	Date/Time					DL = Drum Liquids		
Relinquished By	Date/Time	Received By	Date/Time					T = Tissue		
Relinquished By	Date/Time	Received By	Date/Time					WI = Wipe		
Relinquished By	Date/Time	Received By	Date/Time					L = Liquid		
Relinquished By	Date/Time	Received By	Date/Time					V = Vegetation		
Relinquished By	Date/Time	Received By	Date/Time					X = Other		
LABORATORY SECTION	Received By	Title						Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By						Date/Time		